Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte JEFFREY M. RYAN,
STEVEN M. FILLIPI,
and
THOMAS A. GALL

_____

Appeal No. 1997-3206
Application No. 08/350,274

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ON BRIEF

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Before HAIRSTON, BARRETT, and RUGGIERO, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the final rejection of claims 1-23, all of the claims pending in the present application. An amendment after final rejection filed October 15, 1996, was approved for entry by the Examiner.

The disclosed invention relates to a method and apparatus

for illustrating the progressive sequence of execution of program code. Appellants indicate at page 2 of the specification that, in a preferred embodiment, the program instructions are presented in a plurality of colors, with the different colors corresponding to the order of execution of the software code.

Claim 1 is illustrative of the invention and reads as follows:

> 1. In a data processing system having a display device capable of displaying data, an apparatus for illustrating on the display device an order of execution of software code, comprising:
>
> means for presenting at least portions of software code on the display device, the software code representing instructions for operation of a computer under control of a program; and
>
> presentation means for presenting with the displayed instructions of the software code an integrated visual indication of a progressive sequence of execution of the displayed instructions for the operation of the computer under control of the program.

The Examiner relies on the following prior art:

Brown	4,965,765	Oct. 23, 1990
Gusenius	5,307,493	Apr. 26, 1994

Borland Int'l., Inc. (Borland), "Turbo Debugger User's Guide," version 2.0, pp. 28-29, 62-91, 304-05, 338-39, (1990).

Claims 1, 2, 6-10, 12, 13, 17-21, and 23 stand finally rejected under 35 U.S.C. § 103 as being unpatentable over Brown.

Claims 3-5 and 14-16 stand finally rejected under 35 U.S.C. § 103 as being unpatentable over Brown in view of Borland. Claims 11 and 22 stand finally rejected under 35 U.S.C. § 103 as being unpatentable over Brown in view of Gusenius.

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Brief and Answer for the respective details.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the Examiner, and the evidence of obviousness relied upon by the Examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellants' arguments set forth in the Brief along with the Examiner's rationale in support of the rejection and arguments in rebuttal set forth in the Examiner's Answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 1-23. Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985),

cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

In applying the Brown reference against the limitations of independent claims 1, 12, and 23, the Examiner recognizes that Brown has no explicit teaching of an "integrated visual indication of a progressive sequence of execution . . . " of the displayed instructions of a software code. Nevertheless, the Examiner, as the basis for the obviousness rejection, asserts the obviousness to the skilled artisan of using Brown's color coding scheme for establishing nesting hierarchy to provide such a progressive execution sequence indication. As support for such a conclusion, the Examiner's line of reasoning (Answer, page 4) is set forth as follows: "one of ordinary skill in the art, using

Brown's invention, could easily ascertain the 'progressive sequence of execution' of the program by deducing, from the color scheme, the nesting hierarchy. From the nesting hierarchy, the 'progressive sequence' could easily be deduced."

In response, Appellants assert (Brief, pages 9-13) the Examiner's failure to establish a prima facie case of obviousness. In Appellants' view, no suggestion or motivation exists in Brown itself or in knowledge generally available to the skilled artisan to modify Brown to arrive at the claimed invention.

After careful review of the Brown reference in light of the arguments of record, we are in agreement with Appellants' position as stated in the Briefs. Although the Examiner contends (Answer, page 10) that no modification of Brown is necessary, it is apparent to us that some modification of the color coded nesting scheme of Brown is necessary in order to provide an indication of the sequence of program execution. As pointed out by Appellants (Brief, page 11), the color coded differentiation of nesting structures provided by Brown is independent of the order of instruction execution since some nesting levels may never be executed, and others may be continuously executed. An initial starting point in this modification would be to ascertain the order of execution from the differentiated nested hierarchial instruction structure provided by Brown. Although the Examiner suggests that any skilled artisan with program debugging experience could deduce the order of instruction execution in Brown, such a suggestion is completely devoid of any support on the record. We are not inclined to dispense with proof by evidence when the proposition at issue is not supported by a teaching in a prior art reference, common knowledge or capable of unquestionable

demonstration. Precedent of our reviewing court requires this evidence in order to establish a prima facie case. In re Knapp-Monarch Co., 296 F.2d 230, 232, 132 USPQ 6, 8 (CCPA 1961); In re Cofer, 354 F.2d 664, 668, 148 USPQ 268, 271-72 (CCPA 1966).

It is further our view that, even assuming, arguendo, the correctness of the Examiner's assertion as to the ability of a skilled artisan to deduce order of instruction execution from Brown, such fact alone does not address the obviousness with respect to the specific limitations of appealed independent claims 1, 12, and 23. Each of claims 1, 12, and 23 recites the specific presentation of displayed software code instructions on a display device along with an integrated visual indication of the progressive sequence of execution of the displayed instructions. The Examiner has provided no indication as to how and where the skilled artisan might have found it obvious to modify the teachings of Brown to arrive at the claimed invention. Accordingly, since the Examiner has not established a prima facie case of obviousness, the rejection of independent claims 1, 12, and 23, and claims 2-11 and 13-22 dependent thereon, is not sustained.

As a final comment, we have reviewed the disclosures of Borland and Gusenius, applied by the Examiner to address, respectively, the features of displaying currently executed instructions and the use of numerals to indicate instruction execution, recited in several dependent claims. We find nothing in either of these references which would overcome the innate deficiencies of Brown.[1]

[1]At page 6 of the Answer, the Examiner's comments suggest that Borland provides a visual indication of the progressive sequence of execution of code. Aside from the fact that the Examiner's comments do not provide an exploration of Borland in sufficient detail to enable a determination of the correctness of the Examiner's statement, we decline to rule on the merits of such a contention since the Borland reference has not been applied against the independent appealed claims 1, 12, and 23.

In conclusion, we have not sustained the Examiner's 35 U.S.C. § 103 rejection of appealed claims 1-23. Accordingly, the decision of the Examiner rejecting claims 1-23 is reversed.

REVERSED

KENNETH W. HAIRSTON Administrative Patent Judge	)	
LEE E. BARRETT Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JOSEPH F. RUGGIERO Administrative Patent Judge	)	

JFR:hh

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